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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,647	01/18/2001	Galina Dorozhkina	109289.00173	6089
27557	7590	05/18/2004	EXAMINER	
BLANK ROME LLP 600 NEW HAMPSHIRE AVENUE, N.W. WASHINGTON, DC 20037			MARKHAM, WESLEY D	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 05/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,647

Applicant(s)

DOROZHkina ET AL.

Examiner

Wesley D Markham

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-37 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 – 34, drawn to a method of making an optical information storage medium, classified in class 427, subclass 240.
 - II. Claims 35 – 37, drawn to an optical information storage medium, classified in class 369, subclass 288.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made, respectively. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process, such as (1) a process in which a “covering layer” is not utilized, (2) a process which does not comprise spinning the base, the polymerizable composition, and the covering layer in a centrifuge to distribute the composition (e.g., distributing the composition without spinning), (3) a process of distributing a polymerizable composition without spinning, partially polymerizing the composition, stamping the partially-polymerized composition to form a pattern, and filling the pattern with a fluorescent information storage material, (4) a process of distributing a polymerizable composition without spinning, polymerizing the distributed composition, etching a pattern in the polymerized composition, and filling

the pattern with a fluorescent information storage material, or (5) etching a pattern in a polymer substrate, filling the pattern with a fluorescent information storage material, and then laminating or bonding the filled polymer substrate to a "base" or "covering layer".

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and recognized divergent subject matter, restriction for examination purposes as indicated is proper.
4. Additionally, this application contains claims directed to the following patentably distinct species of the claimed invention: A method wherein:

The polymerizable composition comprises:

- 20 wt% of 1,6-hexanediol diacrylate (HDDA), 35 wt% of ethoxylated bisphenol A diacrylate, 20 wt% of epoxy novolac acrylate oligomer in HDDA, and 2 wt% of DAROCURE 1173.
- 63 wt% of polyester acrylate, 37 wt% of styrene and 2 wt% of benzoin isobutyl ether.
- 23 wt% of modified urethane triacrylate, 5 wt% of 2-(2-ethoxyethoxy)ethylacrylate, 15 wt% of monopropyleneglycol acrylate, 57 wt% of propoxylated trimethylopropane triacrylate, and 2 % of IRGACURE 784.
- 20% of oligocarbonate methacrylate (OCM-2), 80% of aliphatic urethane triacrylate with Mn=5000, and 2% of IRGACURE 651.

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- 50 wt% ethoxylated bisphenol A diacrylate, 10% pentaerythritol triacrylate, 40 wt% of tripropylene glycol triacrylate and 1 wt% of IRGACURE 1700.
- oligocarbonate methacrylate, 1% of IRGACURE 651 and 1% of IRGACURE 1173.
- 20 wt% of poly(vinyl butyral-co-vinyl alcohol-co-vinyl acetate) M.W. 70000, 50 wt% of 1,6-hexanediol diacrylate, 30 wt% of 4-vinyl-1-cyclohexane 1,2-epoxide, 1 wt% of IRGACURE 500, 2 wt% of UVI 6974, and 2 wt% of triarylsulfonium hexafluoroantimonate.
- 10% of 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane carboxylate, 2% of polypropyleneglycol M.W. 400, 15 wt% of tripropyleneglycol divinyl ester, 15 wt% of trimethylolpropane triacrylate, and 58 wt% of oligocarbonate methacrylate (OCM-2, Alvar-M, Ltd.).
- 20 wt% of diepoxide propyleneglycol M.W. 600, 30 wt% of bisphenol A epoxy acrylate, 50% of propoxylated neopentyl glycol diacrylate, 1 wt% of IRGACURE 149 and 1 wt% of IRGACURE 261.

(If the species represented by Claim 6 is selected), the photoinitiator comprises:

- 2 wt% of phenanthrenequinone and 1wt% of triethanolamine.
- 2 wt% of camphorquinone and 1wt% of triethanolamine.
- 1 wt% of eosin B, 1 wt% of dibutylaniline, and 2 wt% of IRGACURE 651.

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The filling composition (with a polymerizable substance, fluorescent dye, and solvent) wherein:

- the polymerizable substance comprises bis(4-glycidyloxyphenyl) methane (80 wt%), 1,2,7,8-diepoxyoctane (10 wt%) and neopentylglycol (10 wt%); the fluorescent dye comprises rhodamine 6G; and the solvent comprises 2-ethoxyethanol, 2-propanol, and ethanol in proportion 2:2:1 (by volume).
- the polymerizable substance comprises bisphenol A diglycidyl ether (75 wt%), 1,4-cyclohexanedimethanol diglycidyl ether (5 wt%), and 1,2,7,8-diepoxyoctane (20 wt%); the fluorescent dye comprises coumarin 314, and the solvent comprises 2-ethoxyethanol, 4-hydroxy-4-methyl-2-pentanone, 2-propanol and ethanol in proportion 1:1:2:1 (by volume).
- the polymerizable substance comprises bisphenol A diglycidyl ether (70 wt%), 1,4-butanediol diglycidyl ether (15 wt%), bis(3,4-epoxycyclohexylmethyl) adipate (5 wt%) and neopentyl glycol ethohylate (10 wt%); the fluorescent dye comprises coumarin 153, and the solvent comprises 4-hydroxy-4-methyl-2-pentanone, 1-butanol, 2-propanol, ethyleneglycol and 2,2,3,3-tetrafluoro-1-propanol in proportion 1:1:2:1:0.5 (by volume).
- The polymerizable substance comprises diglycidyl-1,2-cyclohexanecarboxylate (45 wt%), 3-[bis(glycidyloxymethyl)methoxy]-1,2-propanediol (45 wt%), poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped (mn= 480) (2 wt%) and dipentaerythritol (8 wt%); the fluorescent dye comprises rhodamine 6G; and the

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solvent comprises 4-hydroxy-4-methyl-2-pentanone, 1-butanol, methylethyl ketone and ethanol in proportion 2:2:1:1 (by volume).

- the polymerizable substance comprises 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane-carboxylate (80 wt%), 3-diglycidyl-1,2-cyclohexanedicarboxylate (8 wt%), poly[(o-cresyl glycidyl ether)-co-formaldehyde] (mn= 870) (2 wt%) and poly(caprolactone) triol (mn= 300) (10 wt%); the fluorescent dye comprises oxazine 1, and the solvent comprises 4-hydroxy-4-methyl-2-pentanone, 2-methyl-3-heptanone, 3-methyl-2-butanone and cyclohexanone in proportion 1:1:2:2 (by volume).
- the polymerizable substance comprises 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane-carboxylate (80 wt%), glycerol proxylate triglycidyl ether (0.1 wt%) and poly(vinylbutyral-co-vinylalcohol-co-vinyl acetate (9.9%); the fluorescent dye comprises oxazine 1, and the solvent comprises 2-ethoxyethanol, 1-butanol, 2-propanol and 3-methyl-2-butanone in proportion 4:4:2:1 (by volume).
- the polymerizable substance comprises 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane-carboxylate (90 wt%), poly(caprolactone) triol (Mn= 300) (2 wt%) and poly(vinylbutyral-co-vinylalcohol-co-vinyl acetate) (8%); the fluorescent dye comprises oxazine 1, and the solvent comprises 2-ethoxyethanol, 1-butanol, 2-propanol and 2,2,3,3,4,4,5,5-octafluoro-1-pentanol in proportion 1:1:1:4 (by volume).

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- the polymerizable substance comprises 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane-carboxylate (90 wt%), glycidyl methacrylate (2 wt%) and poly(vinylbutyral-co-vinylalcohol-co-vinyl acetate) (8%); the fluorescent dye comprises oxazine 170 and oxazine 1 in proportion 1:10 (by weight); and the solvent comprises 2-ethoxyethanol, 1-butanol, 2-propanol and 1,1,1,3,3,4,4,4-octafluoro-2-butanol in proportion 1:1:1:2 (by volume).
- the polymerizable substance comprises 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane-carboxylate (10 wt%), 4-vinyl-1-cyclohexane diepoxide (70 wt%), poly(propylene glycol) diglycidyl ether (Mn= 640) (10 wt%), and glycidyl methacrylate (10 wt%), the fluorescent dye comprises rhodamine 6G; and the solvent comprises 4-hydroxy-4-methyl-2-pentanone, 1-butanol, 1,1,1,5,5,6,6,6-octafluoro-2,4-hexanedione, and methylethyl ketone in proportion 2:2:1:1 (by volume).
- the polymerizable substance comprises ethylene glycol divinyl ether (85 wt%), di(ethylene glycol)divinyl ether (10 wt%) and trimethylolpropane trivinyl ether (5%); the fluorescent dye comprises coumarin 334 and pyrromethene 567 in proportion 1:1 (by weight); and the solvent comprises 2-ethoxyethanol, 2-butanol, 2-propanol, 1,1,1,3,3,4,4,4-octafluoro-2-butanol, 2,2,3,3-tetrafluoro-1-propanol in equal proportions (by volume).

The filling composition (used in conjunction with the fluorescent dye-containing covering composition) comprises:

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- 3 wt% of polyacrylic acid solution in a mixture of 80% ethyl glycol and 20% isopropanol.
 - 3,4-epoxycyclohexylmethyl-3,4-epoxycyclohexane-carboxylate (80 wt%), glycerol proxylate triglycidyl ether (0.1 wt%), and poly(vinylbutyral-co-vinylalcohol-co-vinyl acetate) (9.9%).
5. Should applicant elect Group I, applicant is required under 35 U.S.C. 121 to elect a single disclosed species from each group of species presented above for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claims 1, 2, 15, 16, 27 – 29, and 32 – 34 are generic.
6. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election. Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).
7. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing

the species to be obvious variants or clearly admit on the record that this is the case.

In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

8. Applicant is advised that the reply to this requirement, to be complete, must include an election of the invention to be examined even though the requirement may be traversed (37 CFR 1.143).
9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D Markham whose telephone number is (571) 272-1422. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.

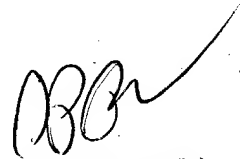
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WDM

WDM

Wesley D Markham
Examiner
Art Unit 1762


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SUPERVISORY PATENT EXAMINER
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